YOU SAY I CAN, I THINK I CAN: PERIPHERAL ROUTE PERSUASION AS A CONTRIBUTOR TO EMPLOYABILITY SELF-EFFICACY FOR UNDERGRADUATE STUDENTS

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A

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Abstract

The purpose of this study was to investigate the persuasive communication phenomenon between university students and professors concerning students' post-degree employability. Communicative interactions were examined as originating with the Elaboration likelihood model's peripheral route cues (persuasive messages) and the outcomes of these interactions as student's employability self-efficacy (beliefs about employability). Hypotheses predicted that a positive correlation exists between perceived peripheral route cues and employability self-efficacy of students.

Senior level undergraduate students at a Northwestern university voluntarily completed an electronic survey containing need for cognition, peripheral route cues, and employability self-efficacy measures. Analysis indicated that employability self-efficacy could be successfully predicted by peripheral route cues. Results showed an overall significant positive correlation between the predictor and outcome variable. Implications of these results, limitations of the study, and future research directions are discussed.

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Chapter 1

Review of Related Literature

1.1 Statement of the Problem and Goals of the Research

Communicative messages concerning employability from professors to students can be understood as an act of persuasion in which an argument or many arguments are presented. While this argument may align closely with the beliefs and expectations of students, it still provides a statement of information which can be either accepted or rejected by a recipient.

A better understanding of this communicative act between professors and students can be achieved utilizing the Elaboration Likelihood Model of Petty and Cacioppo (1986). A communicative act, taken as persuasion, may potentially relate to students' beliefs about themselves. Beliefs held by students about their own skills, abilities, and the likelihood that they will exemplify the outcome presented in persuasive arguments by professors fits closely with the theory of self-efficacy Bandura (1977). The present study will examine employability self-efficacy of undergraduate students as it relates to the persuasive messages of university professors concerning employability.

Peripheral route cues in the Elaboration Likelihood Model will be examined in relation to employability self-efficacy for undergraduate students. The relationship between these variables can provide insight into the communicative relationship between professors and students concerning students' beliefs and perceptions about their own employability.

1.2 Elaboration Likelihood Model

The elaboration likelihood model (ELM) by Petty and Cacioppo (1986) is based on a fundamental principle that persuasion is an outcome of attitude change. The authors state that the elaboration likelihood model is "a fairly general framework for organizing, categorizing, and understanding the basic processes underlying the effectiveness of persuasive communications" (p. 125). The treatment of persuasion, both in communication and other social science disciplines, has addressed the principle of attitude change previous to the development of this model. Petty and Cacioppo note that during the 1970's interest in the link between attitude and persuasion had waned substantially. This movement was seen as rooted in concerns of causal linkage between changes in attitude and behavior, as well as what the authors cite to be a lack of empirical conclusions on the subject.

1.2.1 Overview of the Elaboration Likelihood Model of Persuasion. Petty and Cacioppo have addressed persuasion from multiple vantage points, beginning in the late 1970's and continuing through the last three decades. Seminal in the research process is the work by Petty, Cacioppo, and Goldman (1981) on the link between personal involvement and argument-based persuasion, as well as the Petty and Cacioppo's (1979) work on issue involvement and persuasive components of message-relevant cognitive responses. The development of the Elaboration Likelihood Model is the culmination of nearly three dozen publications by Petty and colleagues preceding the theory.

Persuasion is posited in the ELM to occur as a process between a persuasive argument and an individual receiver of that argument. The persuasive argument, seen as

a stimulus, serves to elicit some process of thought in an individual. The thought process, is defined by the authors as an individual's movement within a construct or continuum of elaboration. This continuum, described in more detail shortly, ranges from high-elaboration to low-elaboration, indicating greater and lesser cognitive thought of persuasive messages respectively. Petty and Cacioppo (1986) specifically highlight that "the likelihood of elaboration will be determined by a person's motivation and ability to evaluate [cognitively] the communication presented" (p. 129) in the process of attitudinal change towards persuasion. Attitudes as presented by the authors are the "general evaluations people hold in regard to themselves, other people, objects, and issues . . . and are capable of influencing or guiding behavioral, affective, and cognitive processes" (Petty & Cacioppo, 1986, p. 127).

1.2.2 Exploration of the Routes of Persuasion. Petty and Cacioppo (1986) describe persuasion as occurring for an individual within the continuum of elaboration, or more specifically as through mechanisms of two divergent routes. High-elaboration and low-elaboration are descriptive terms for central and peripheral routes of persuasion. High-elaboration is the situation under which central route persuasion can occur, and low-elaboration is the situation under which peripheral route persuasion can occur. Although high-elaboration/central route and low-elaboration/peripheral are often presented synonymously as the same phenomena, they actually constitute process/label relationships. Elaboration corresponds to process, whereas route corresponds to label.

The two routes of persuasion in ELM can be described as a process by which "elaboration, or critical thinking, occurs in the *central route*, while the lack of critical

thinking occurs in the *peripheral* [route]" (Littlejohn & Foss, 2008, p. 74). This description of the elaboration continuum, like many others, highlights the extreme nature of differences between persuasion occurring under high elaboration and that which occurs under essentially no elaboration. Petty and Cacioppo (1986) however, see the two routes of persuasion as "the 'central route,' occur[ing] when motivation and ability to scrutinize issue-relevant arguments [are] relatively high . . . [and the] 'peripheral route,' occur[ing] when motivation and/or ability [are] relatively low and attitudes are determined by positive or negative cues in the persuasion context" (p. 131).

While the extreme opposites in the continuum of elaboration are acknowledged by Petty and Cacioppo, their definition of central and peripheral routes indicates the presence of both routes, occurring simultaneously at different levels. Essentially when central route processing of persuasive messages is high, peripheral route processing of those messages is low; conversely a low level of central route processing in persuasive message processing is accompanied by a high level of peripheral route persuasive message processing. While both central and peripheral routes can lead to persuasion, they do not occur in the complete absence of the other. The two routes are better conceptualized as "two qualitatively distinct routes to persuasion" (Petty & Cacioppo, 1986, p. 131) that can occur together, rather than as mutually exclusive.

1.2.3 The Need for Cognition. Petty and Cacioppo (1986) examined a determinant factor in the effectiveness of central or peripheral route processing for an individual. This determinant, labeled need for cognition (Petty and Cacioppo 1986), is a trait type personality signifying an individual's general tendency or likelihood of

engaging in careful cognitive consideration while thinking Petty and Cacioppo (1986). Cacioppo and Petty (1982) developed a need for cognition scale which places individuals in either a high or low need for cognition category. High need for cognition is stated by the authors to increase the effectiveness of central route processing, while low need for cognition is stated to increase the effectiveness of peripheral route processing. Conversely an individual who is ranked high on the need for cognition scale will be less persuaded by peripheral route processing, and those ranking low on the need for cognition scale are stated to be less persuaded by central route processing.

1.2.4 Central Route Processing. Central route processing of persuasive messages occurs under high-elaboration conditions. An essential component of central route processing is that the arguments within persuasive messages are weighed against the listener's beliefs. If the attitudinal change occurs in this route then persuasion also occurs, and thus a fundamental change in belief, occurs for the recipient. Several factors affect the outcome of central route processing in persuasion and include (a) distraction, (b) repetition, (c) personal relevance and personal involvement, (d) personal responsibility, and (e) need for cognition, according to Petty and Cacioppo (1986), and Littlejohn and Foss (2008). These factors are representative of an individual's motivation and ability to engage in high-elaborative thought concerning the persuasive message.

Distraction and repetition are two factors which have potentially negative relationships with high-elaboration processing (Petty & Cacioppo, 1986). Distraction, which is the primary determinant of an individual's *ability* to process persuasive messages, has a negative relationship in that an increase in distraction leads to a decrease

in engaging in central route processing (Petty & Cacioppo, 1986). Repetition of the message can increase an individual's *motivation* to engage in central route processing; however, an excess of repetition can also lead to a decrease in the individual's motivation. Petty and Cacioppo (1986) describe this phenomenon as a two stage process that "in the first stage, repeated presentations of a message provide[s] recipients with a greater opportunity to consider the implications of the content of the message in a relatively objective manner . . . [and] in the second stage, the relatively objective processing of the first stage ceases as tedium and/or reactance are elicited by the excessive exposures" (p. 143). In the first stage, repetition and central route processing have a positive relationship. In the second stage, repetition and central route processing have a negative relationship.

Personal relevance and personal involvement, personal responsibility, and need for cognition are all primarily concerned with an individual's motivation to engage in central route processing. While all of these factors affect an individual's motivation, they do so in different ways and from distinct vantage points.

Personal relevance and personal involvement can best be described as the applicability that a persuasive argument has for an individual (Petty & Cacioppo, 1986). Personal relevance as the applicability of the argument as it directly impacts the individual, and personal involvement as the desire of an individual to be informed or influential in the persuasive context as it relates to themselves or to others.

Personal responsibility is representative of an individual's perception of his or her importance in decision making towards the outcome of a persuasive argument (Petty &

Cacioppo, 1986). If an individual determines that being persuaded or not being persuaded has personal consequences, he or she will retain a sense of personal responsibility. Conversely, if an individual believes that the decision-outcome of a persuasive endeavor is diffused over a larger group of people, then his or her sense of personal responsibility may be diminished (Petty & Cacioppo, 1986).

The need for cognition is a trait type personality disposition of an individual, and represents the individual's willingness and desire to critically and cognitively evaluate the physical and social world (Petty & Cacioppo, 1986). This individual predisposition is different from the other factors of central route processing, which are best described as state type personality instances for an individual, in that the persuasive message may be engaged with high-elaboration regardless of the presence of other factors (Petty & Cacioppo, 1986).

1.2.5 Peripheral Route Processing. Peripheral route processing of persuasive arguments is described by Petty and Cacioppo (1986) as persuasion "which [has] more likely occurred as a result of some simple cue in the persuasion context (e.g., an attractive source) that induced change without necessitating scrutiny of the true merits of the information presented" (p. 125). The peripheral route, or low-elaboration of persuasive messages, is thought by Petty and Cacioppo (1986) to be less enduring and substantial than central route processing; however, peripheral route processing is stated to still lead towards attitudinal change- thus leading to a change in fundamental beliefs and persuasion.

Rather than careful cognitive consideration and elaboration of the specific content of messages, individuals who engage in peripheral route processing are relying on cues outside of the message, and then transposing those cues directly onto the validity of the message (Petty & Cacioppo, 1986, p. 131). The act of peripheral route processing has utility in the negotiation of persuasive messages which are neither complex nor require the full elaborative process. Petty and Cacioppo (1986) specifically state that individuals "are not motivated nor are they able to scrutinize carefully every message that they receive . . . and [that] it would not be adaptive for them to do so" (p. 128). Peripheral route processing is thought to occur when high-elaboration, central route processing is low for an individual, and conversely to be low when the factors of central route processing are in effect predominant for the individual.

Cues, the central components of peripheral route processing range from affecting attitudes by evoking "primitive affective states that become associated with the attitude object . . . [to ones which] invoke guiding rules or inferences" (Petty & Cacioppo, 1986, p. 134). The cues in peripheral route processing thus operate outside the specific content of the persuasive message, and instead provide an alternative method by which an individual may be persuaded.

Peripheral cues which are explored in Petty and Cacioppo's (1986) work include (a) argument quality, (b) source expertise, (c) number of arguments, (d) source likability, and, (e) attractiveness. Littlejohn and Foss (2008) describe these cues as external to the argument itself, and facilitating judgment calls by the individual.

Argument quality is related to the physical structure of a persuasive message. Persuasive messages, for instance, that adhere closely with established logical forms of persuasion are attributed credibility regardless of their actual importance to an individual, or the credibility of the argument itself (Petty & Cacioppo, 1986). This cue can be seen to particularly relate to arguments which are short and, according to Petty and Cacioppo (1986) do not require high levels of elaboration.

Source expertise refers to the perceived appropriate background and experiences of the source (Petty & Cacioppo, 1986). Persuasive arguments presented on a subject by an individual who works in a field related to that subject are considered to have higher source expertise than a similar message presented by an expert in an unrelated field. The content of the message is not important, except in the quick evaluation of the source's relation to the content (Petty & Cacioppo, 1986).

The number of arguments represents a peripheral cue based on the perception of an individual that more arguments are presented in a persuasive message. Petty and Cacioppo (1986) state in research findings "that under low relevance, the number of arguments serves as a simple cue, increasing agreement regardless of argument quality," (p. 157) as well as that under high relevance the number of arguments decreases argument quality or becomes unimportant to the individual. When the ability or motivation to engage in high-elaboration central route processing is not required, determinations and judgments can be more effectively developed based on the simple summation process of presented arguments (Petty & Cacioppo, 1986).

Source likeability refers to an individual's personal opinion of the source presenting persuasive arguments (Petty & Cacioppo, 1986). Individuals who hear persuasive messages from close friends or popular media icons may utilize the likability of that person as a cue in making judgments about the persuasive message.

Attractiveness is representative of appealing stimuli in the message such as visual salience or pleasant music. These stimuli are not directly related to the content of the message; however, they are cues which can influence judgments of message materials under conditions of low-elaboration.

1.2.6 Review of Research Findings on Central and Peripheral Route Processing. The central route to persuasion has been researched in great deal by numerous individuals, including Petty and Cacioppo (1986), the authors of the Elaboration Likelihood Model. While this research adds greatly to the body of knowledge surrounding ELM, the findings and complexities therein are not conducive to this current research and will not be explored.

Research concerning persuasion via the mechanisms of peripheral cues played a pivotal role in the development of the Elaboration Likelihood Model of communication. As well as serving as a foundation for ELM, peripheral cue persuasion research has been continued both by the authors of the ELM, as well as numerous other researchers. Following is a discussion of current research in support of the involvement of peripheral cues in persuasion.

Argument quality has been shown to have a significant positive correlation with persuasion (Park, Levine, Kingsley, Westerman, Orfgen, & Foregger, 2007), in their

research on persuasive messages administered to university students Park et al. discovered that "strong argument messages were consistently more persuasive than the weak arguments across topics, position advocated, attitude modification process, and involvement" (p. 96). Similarly, Martin, Lang, and Wong (2004) found evidence of a positive relationship between argument quality and persuasion in high need-for-cognition individuals presented with advertisement materials. Moreover, Moons, Mackie, and Garcia-Marques (2009) obtained support for the effectiveness of argument quality for persuasive messages when paired with argument repetition. Lastly, in a study by Kang, Cappella, and Fishbein (2006) low-risk youths exposed to anti-drug public service announcements were found to experience increased persuasion under high argument quality conditions.

Source expertise was found to increase persuasion in a study by Ziegler and Diehl (2001). In their study source expertise was found to have a significant positive relationship with perceived argument strength (quality) for consistent source information messages (likable expert/dislikable non-expert); however, a negative relationship was found for inconsistent source information messages (likable non-expert/dislikable expert). In the second scenario source likability was a better predictor of participants' perception of argument strength than in the first scenario. DeBono and Snyder (1992) provided evidence of a positive correlation between message persuasiveness and source expertise for individuals classified as repressors (conflict avoidant). DeBono and Harnish (1988) found evidence of a positive relationship between source expertise and persuasion for individuals in their study who had a low rating on the self-monitoring scale. This

rating was roughly equated with the low need for cognition condition variable described in the ELM model.

The increased number of arguments in persuasive messages was found by Petty and Cacioppo (1984) to increase the persuasive effects of messages for low need-for-cognition individuals. Wang and Chen (2006) found in their study that young adults meeting the low need-for-cognition criteria were more persuaded by arguments as the number or arguments presented increased. Maddux and Rogers (1980) found that an increased number of arguments led to increased persuasion when the source was perceived as expert by the participants.

Ziegler and Diehl (2001) also discovered that likeability of the source was linked with perceived argument strength of persuasive messages. Their research found that source likeability was a stronger influence on perceived argument strength over dislikable sources except for dislikable experts representing inconsistent source information. Additionally, research by Reinhard and Messner (2009) showed that source likeability had a strong positive relationship with the persuasive strength of an argument in individuals with a low need-for-cognition. Similarly, Reinhard, Messner, and Sporer (2006) found that an individual's liking of the source increased his or her engagement towards being persuaded, while conversely and individual's decreased liking of the source led to lower engagement. Finally, Chaiken's (1980) found that source likeability had a significant influence on opinion change for participants who were considered low-involvement (low need-for-cognition).

Much of the research conducted concerning peripheral cue effectiveness for increasing the persuasiveness of messages treats several variables simultaneously. Often peripheral cues effects are found to be interrelated with the other peripheral cues, or the level of elaboration for the participants. These findings align with Petty and Cacioppo's (1986) postulate that "as motivation and/or ability to process arguments is decreased, peripheral cues become relatively more important determinants of persuasion" (p. 152).

1.3 Self-Efficacy

Bandura's (1977, 1997) theory of self-efficacy describes how behavioral change in an individual can occur when experiences are carefully processed by an individual through cognitive means, the end result of such processing being either an increased or decreased sense of self-efficacy. Increased self-efficacy adds to the motivational likelihood of engaging in behavioral change, while conversely decreased self-efficacy detracts from the motivational likelihood of engaging in that same behavior Bandura (1977). Fundamental in this theory is the notion that self-efficacy is not a psychological state, nor is it a predetermined proclivity which determines if individuals engage in behavioral change. Self-efficacy is instead a reflective self-perception by an individual of his or her motivation and expectations for engaging in behavior as it relates to conceptions of self and ability (Bandura, 1977).

1.3.1 Overview of Self-Efficacy. Self-efficacy, as a developed theory of an individual's proclivity to engage in adverse behaviors, has branched out into several areas of study during its history (Bandura, 1997). Self-efficacy, originally developed by Albert Bandura as a unifying theory of behavioral change, dealt primarily with fears, phobias,

and other psychological deviancy. Since the inception of self-efficacy, Bandura (1997) states that numerous studies have expanded the concepts of self-efficacy to deal with individuals' behavioral decision making processes beyond the scope of psychological disorders such as phobias. The concept of adverse behaviors was successfully expanded from debilitating fears and phobias towards behavioral occurrences in the social world which may seem difficult or challenging to otherwise healthy and engaged individuals.

Bandura (1997) presents a summative exploration of key application directions which have developed during the evolution of self-efficacy. These key applications are (a) cognitive functioning, (b) health functioning, (c) clinical functioning, and (d) athletic functioning to list a few. Each of these applications, as well as numerous others, utilizes the core concepts of self-efficacy in a theoretical application towards better understanding of the phenomenon.

Self-efficacy, regardless of its application, is the process by which an individual engages in behavioral change as a result of cognitive processing. Bandura (1997) believes that cognitive processing is a mechanism by which an individual analyzes information from multiple sources including both experiential and communicative interactions with the social world. Bandura (1997) also believes that this process is necessary for individuals to develop and modify behavioral patterns. Unless an individual undergoes some form of personal cognitive processing about either his or her experiences or derived expectations from interaction with the social world, he or she will be unable, or more likely unmotivated, to approach or attempt mildly difficult behavioral tasks.

1.3.2 Motivation in Self-Efficacy. Motivation is described by Bandura (1997) as both an individual's level of interest in engaging in specific behaviors as well as their beliefs about success should they engage in those behaviors. When developing motivation, individuals cognitively perceive success in future endeavors by their current skills or abilities, as well as by the outcomes of their previous attempts.

1.3.3 Expectations in Self-Efficacy. Similar to the two components of motivation, interest and belief of success, expectations in self efficacy are split into two separate categories: Efficacy expectations, which can be seen as the individual's personal belief about future success, and outcome expectations, which refers to the individual's belief that success will occur for a group of relatively equal individuals, presumably similar to that individual. Bandura (1977) describes efficacy and outcome expectations as differentiated "because individuals can believe that a particular course of action will produce certain outcomes, but if they entertain serious doubts about whether they can perform the necessary activities such information does not influence their behavior" (p. 193). Although motivation and expectation appear to be similar, they represent two distinct concepts of self-efficacy.

1.3.4 Efficacy Expectations. Efficacy expectations are stated to arise from four distinct sources, each source being representative of interaction between an individual and his or her social or physical world (Bandura, 1977). The four sources, (a) performance accomplishments, (b) vicarious experience, (c) verbal persuasion, and (d) emotional arousal, are thought to be stimuli by which expectations of mastery are developed for individuals (Bandura, 1997). Efficacy expectation sources are not thought

to be inherently meaningful, instead they only become salient when an individual cognitively engages them in reflective thought (Bandura, 1997). The process of reflective thought is the mechanism of belief change which mediates the effects of efficacy expectation source stimuli.

1.3.5 Verbal Persuasion. Verbal persuasion is a process thought to be widely used "to get people to believe they possess capabilities that will enable them to achieve what they seek" (Bandura, 1982, p. 127). Verbal persuasion is a source of persuasion where an single individual persuades another individual through spoken words. Bandura also mentions social persuasion, in which persuasion is thought to be a many-to-one method of communicative persuasion.

Persuasion as a source of efficacy expectations is considered to be limited in its ability to positively or negatively affect self-efficacy as an isolated influence; however, when combined with the influence of other sources, persuasion has a strong bolstering effect (Bandura, 1997). Bandura (1977) believes when people are persuaded that they are capable of achievement, and are also provided with performance aids (training, skills), they are more likely to engage in the behavior than if they had only received the performance aids.

The presence of persuasion, either verbally from an individual or socially, requires additional cognitive processing in addition to the combined influence of other sources. Persuasion must also be received by an individual in such a way that he/she decides to ascribe value to the statements. Bandura (1977) notes that "simply informing [individuals] that they will or will not benefit from treatment does not mean that they

necessarily believe what they are told, especially when it contradicts their other personal experiences" (p. 198).

1.3.6 Review of Research Findings on Employability Self-Efficacy. A major application of self-efficacy is in the direction of employability. Researchers such as Paulsen and Betz (2004), Grier-Reed and Skaar (2010), Washington (1999), Cardoso and Moreira (2009) to name a few, have approached the phenomenon of employability from numerous directions with the common interest of deriving methods by which successful or beneficial employment can be achieved by individuals through self-efficacy changes. Bandura (1997) describes facets of employability self-efficacy to include areas such as career development self-efficacy, occupational role enhancement self-efficacy, and the mastery of occupational roles as it relates to an individual's self-efficacy. Other researchers have examined employability self-efficacy phenomena similar to those described by Bandura; however, each has taken a unique focus in their exploration of the broad phenomenon.

Career-making self-efficacy is a concept presented by Paulsen and Betz (2004) to represent "the individual's belief that he or she can successfully complete tasks necessary to making career decisions" (p. 354), and to include factors such as self-appraisal, goal selection and planning. The authors' work aimed at determining influential factors in increasing career-making self-efficacy, and found that leadership confidence was the most significant attribute. Their study did not aim to affect individual self-efficacy; however, the authors provide definitional insight into a relationship between individuals'

perceived abilities and self-efficacy while also providing definitions related to the greater body of employability self-efficacy research.

Grier-Reed and Skaar (2010) studied career decision self-efficacy as an outcome of participation in a career course. They describe career decision self-efficacy as a combination of factors including empowerment, self-appraisal, goal selection, and career decisiveness. The authors' findings supported the hypothesis that constructivist career courses would increase a participant's level of career decision self-efficacy.

In order to better understand the relationship between self-efficacy and employability, Washington (1999) studied the effects of group therapy on chemically dependent women as it interacted with the two variables. The author conceptualized employability for the research participants as including self-perceptions of their ability or likelihood of securing employment when engaging in job searches. Washington found that increased group therapy successfully increased the self-efficacy of participants in regard to their perceived employability.

Cardoso and Moreira (2009) examined the hypothesis that individuals' perceptions of career barriers are moderated by their self-efficacy in career roles. The authors measured career role self-efficacy through the utilization of the Career Roles Self-Efficacy Inventory which includes five roles: student, worker, leisure, homemaker, and citizen. These roles are rated in terms of confidence intervals, indicating participants' perception of ability and willingness in each role. The authors found that self-efficacy in each career role has a negative relationship with perceptions of career barriers such as lack of skills and training or high competition for jobs.

These studies in employability self-efficacy serve two important functions in the present study. First, the findings from these authors indicate that self-efficacy can be manipulated, leading sometimes to behavioral change. Secondly, these studies help frame an operational definition for employability self-efficacy that can be utilized in the present study.

1.4 Hypothesis

1.4.1 Rationale. If a person's need for cognition is low, then the presence of peripheral route cues should increase the likelihood of persuasion.

In contrast, if a person's need for cognition is high, then the presence of peripheral route cues should decrease the likelihood of persuasion.

If the presence of peripheral route cues leads to an increase in persuasion, and an increase in persuasion leads to an increase in self-efficacy, then the presence of peripheral route cues will increase self-efficacy.

If the peripheral route cues accompany employability messages and lead to an increase in employability persuasion, and an increase in employability persuasion leads to an increase in employability self-efficacy, then the peripheral route cues accompanying employability messages will lead to an increase in employability self-efficacy.

1.4.2 Hypotheses. The following hypotheses are formally presented.

H1: There is a positive correlation between perceived argument quality and employability self-efficacy, controlling for need for cognition.

H2: There is a positive correlation between perceived source expertise and employability self-efficacy, controlling for need for cognition.

H3: There is a positive correlation between perceived number of arguments and employability self-efficacy, controlling for need for cognition.

H4: There is a positive correlation between perceived source likeability and employability self-efficacy, controlling for need for cognition.

1.4.3 Research Question. In addition to testing these hypotheses, the individual peripheral route cues were tested controlling for other peripheral route cues and need for cognition in order to determine their relationship with employability self-efficacy. The following research question is presented as follows.

RQ1: Does each individual peripheral route cue predict significant variation in employability self-efficacy?

Chapter 2

Research Methodologies

2.1 Methods

2.1.1 Population and Sample. The present study drew a sample from a population consisting of senior level, undergraduate students pursuing a bachelor's degree at the University of Alaska Fairbanks. This population was comprised of approximately 500 senior level students (University Facts [UF], 2010). The sample was comprised of 37 male and 68 female participants. Participant age ranged from 20 to 57 (M=27). The sample was 77.1% White, 7.6% Asian, 6.7% American Indian or Alaska Native, 3.8% Hispanic or Latino, 3.8% Black or African American, and 1% Hawaiian or Other Pacific Islander. Participants from the sample represented 37 different degree majors offered at the university.

A convenience sample consisting of 105 students was drawn from the target population. Individuals were recruited through the use of University generated e-mail list serves which reached only the target population. A recruitment e-mail was sent out a total of three times over the course of two weeks during the Spring 2011 academic semester. The use of a list serve was chosen to help ensure that the sample was representative of the highest variability of declared majors in the social and physical sciences.

2.1.2 Predictor Variables. The set of predictor variables in this study was selected from the larger group of variables in the peripheral route of persuasion as outlined in Petty and Cacioppo's (1986) Elaboration Likelihood model. Peripheral route persuasion

is determined by an individual's need for cognition and is comprised of five peripheral cues: (1) argument quality, (2) source expertise, (3) number of arguments, (4) source likability, and (5) attractiveness. Need for cognition and the first four cues were utilized, and were operationalized as follows. Need for cognition is high when an individual indicates a higher level of engagement in careful and effortful thinking (Cacioppo, Petty, & Feng Kao, 1984). The first peripheral cue, argument quality, is high when message content adheres closely to established logical forms of persuasion such as clarity, syllogistic reasoning, or general believability. Source expertise, the second peripheral cue, is high when the source of the message is experienced, qualified, or knowledgeable in relation to the message. The third peripheral cue, number or arguments, may either be indicated by the frequency or sum of arguments, or be indicated by the number of distinct sources which provide complimentary arguments. Source likeability, the fourth peripheral cue, is high when the source of the message is believed by the recipient of the message to be friendly, enjoyable, pleasant, or likeable.

Need for cognition was measured using the NCS short form developed by Cacioppo, Petty, and Feng Kao (1984). This form is comprised of 18 Likert scale items ranging from 1[Strongly Disagree] to 5[Strongly Agree]. A high mean score on the NCS short form indicates a high level of need for cognition, while a low mean score indicates a low need for cognition. The NCS short form yielded adequate reliability at (Chronbach's alpha = .90), which is identical to Cacioppo, Petty, and Feng Kao's (1984) reliability report.

Individual responses to survey items regarding peripheral cues 1,2, and 4 were measured on a continuous interval level Likert scale, which ranged from 1[Strongly Disagree] to 5[Strongly Agree]. A high mean score indicated a high level for the particular peripheral cue, and dependant on the total score for other cues, representative of successful persuasion for the individual. A low score, approaching 5, was indicative of a low level for the particular peripheral cue measured, and may have indicated increased persuasion for the individual. A low mean score indicated a low level for the particular peripheral cue measured, and may have indicated decreased persuasion for that individual. Adequate reliabilities were found for peripheral route cue survey items as follows: Argument quality (Chronbach's alpha = .84), Source expertise (alpha = .85), Source Likability (alpha = .89).

Peripheral cue, number of arguments, was measured on a continuous ratio level scale in the electronic survey. A low score for each sub-type of argument quantity would be a true zero, while the high score for each sub-type was capped at 100. Low scores for this scale represented no presence of arguments and therefore no persuasion. Increasingly higher scores represented an increased number of arguments, and may have also indicated increased persuasion. Reliability tests of survey items for this cue were not performed due to the continuous ratio level scale.

2.1.3 Criterion Variable. The criterion variable in the present study was employability self-efficacy. This variable was operationalized as follows. Employability self-efficacy is high when an individual believes he or she possesses the required skills and abilities necessary for employment and has a high expectation of future employment.

Employability self-efficacy was measured through the use of an electronic survey. Items on the survey concerning employability self-efficacy were measured on a continuous interval level Likert scale. A high mean score on this measure indicated a high level of employability self-efficacy. Conversely, a low mean score indicated a low level of employability self-effiacacy. Adequate reliability was found for employability self-efficacy at (Chronbach's alpha = .78).

2.1.3 Statistical Analysis. Scored responses from the survey items were analyzed using partial correlation and linear regression. Wrench et al. (2008) suggested that linear regression is best suited for studies examining the relationships between two or more interval or ratio variables. Peripheral cues variables, measured on interval and ratio scales, were analyzed in relationship to the interval level variable employability self-efficacy. Correlation and linear regression were also best suited for analysis of these data in that they allowed for a detailed examination of each predictor variable (peripheral cue) in relation to the criterion variable (employability self-efficacy) and in relationship to other criterion variables, while controlling for the other peripheral cues and need for cognition. Petty and Cacioppo (1986) describe peripheral route to be a process by which individual peripheral cues facilitate the persuasion process for individuals. Linear regression will allow for testing each peripheral cue as a facilitating factor of persuasion uniquely while holding constant other peripheral cues. This approach was ideal in preserving information obtained from individual items grouped by their relation to peripheral cues.

2.1.4 Procedure. In order to begin the present study, a request was submitted to the Institutional Review Board (IRB) of the university at which the study was conducted. This request was submitted as an exemption classification, meaning that there was little to no perceived threat or harm to potential participants. A copy of the exemption request letter is shown in Appendix A. The informed consent letter presented at the beginning of the survey measure is shown in Appendix B.

The present study began with the recruitment of a sample from the target population. Participants from the sample were asked to complete an electronic survey comprised of 48 total items, 41 of which related to the variables measured, and seven of which related to demographic information and verification of membership in the target population (Appendix C). The survey instrument asked participants to respond to Likert items pertaining to their perceptions of faculty in their declared major. These perceptions were focused around peripheral cues in persuasive employability messages from the faculty. Likert items relating to participants' employability self-efficacy were also presented to participants. Participants were additionally instructed that if they had already begun a formal job search, they should continue with the survey responding to the items as they would have before beginning the formal job search.

Confidential data collected from the electronic survey were stored in electronic database formal and subsequently imported into SPSS for the purpose of conducting linear regression analysis to determine the relationships among the variables.

Chapter 3

Results

3.1 Participant Response

A total of 105 surveys were completed during the study. The overall response rate was approximately 20% of the estimated total targeted population.

3.2 Analyses

To test the hypotheses partial correlation analysis was performed with two-tailed (non-directional) alpha set at .05, with missing responses removed pairwise. Results for the correlation analysis of the hypothesis are shown in Table 1 (Appendix E). Linear regression analysis was performed on the peripheral route cues in order to answer the research question. This analysis allowed for examination of each predictor variable while holding other predictor variables constant. The test was performed with alpha set at .05. Results for the linear regression analysis are shown in Table 2 (Appendix E).

3.2.1 Hypotheses. Hypothesis 1 predicted that there was a positive correlation between perceived argument quality and employability self-efficacy, while controlling for need for cognition. This hypothesis received support with a significant positive correlation, $r = .47$, $p < .001$, between the mean score for argument quality and the mean score for employability self-efficacy.

Hypothesis 2 predicted that there was a positive correlation between perceived source expertise and employability self-efficacy, while controlling for need for cognition. This hypothesis received no support, as there was not a significant positive correlation, *r*

= .16, p = .101, between the mean score for source expertise and the mean score for employability self-efficacy.

Hypothesis 3 predicted that there was a positive correlation between the perceived number of arguments and employability self-efficacy, while controlling for need for cognition. This hypothesis received no support, as there was not a significant positive correlation, r = .07, p = .532, between the ratio number of arguments score and the mean score for employability self-efficacy.

Hypothesis 4 predicted that there was a positive correlation between perceived source likeability and employability self-efficacy, while controlling for need for cognition. This hypothesis received support with a significant positive correlation, r = .21, p = .033, between the mean score for source likeability and the mean score for employability self-efficacy.

3.2.2 Research Question. Standard multiple regression regarding the research question showed that overall predictor variables (argument quality, source expertise, number or arguments, source likeability, and need for cognition) can significantly predict employability self-efficacy $F(5,70) = 6.49$, p = .003. R^2 for the model was (.22) with an adjusted R^2 of (.17). Unstandardized regression coefficients (B), intercept, and standardized regression coefficients (ß) for each predictor variable are displayed in Table 2 (Appendix E).

Argument quality was a significant positive predictor of employability self-efficacy, (t = 3.95, p < .001). Other variables showed no significant prediction of the

outcome variable: Source expertise (t = -.36, p = .72), Number or arguments (t = .59, p = .554), source likeability (t = .01, p = .992), and need for cognition (t = -.21, p = .836).

3.2.3 Other Findings. Correlation analysis also yielded significant positive results between several predictor variables. Peripheral route cues argument quality and source expertise had a significant positive correlation, r = .46, p < .001. Peripheral route cues source likeability and argument quality had a significant positive correlation, r = .49, p < .001. Peripheral route cues source expertise and source likeability had a significant positive correlation, r = .63, p < .001.

Chapter 4

Discussion

The purpose of the present study was to determine if there were positive correlations between perceived peripheral route cues and employability self-efficacy for undergraduate students. In addition, the relationships between individual peripheral route cues and employability self-efficacy were examined, holding constant other peripheral route cues. The findings revealed that the presence of peripheral route cues lead to an increase in employability self-efficacy. Undergraduate students, who perceived peripheral route cues relating to their post-degree employability, are suggested by the findings to have had greater beliefs and expectations about their abilities and skills related to employment. The following sections discuss the relationship between argument quality and employability self-efficacy, source expertise and employability self-efficacy, the number or arguments and employability self-efficacy, as well as source likeability and employability self-efficacy while controlling for need for cognition.

4.1 Findings and Conclusions

Results from the partial correlation analysis provided support for the first hypothesis. Hypothesis 1 stated that there was a positive correlation between the peripheral cue argument quality and employability self-efficacy. This result indicated that professors in an undergraduate's major area of study who were perceived to communicate believable, logical arguments increased the employability self-efficacy of their students, such that they experienced increased belief and expectations of their skills and abilities to acquire employment post-degree. It is likely that this significant

relationship stemed from the operationalized definition of the variable (logical arguments, believability). It is unlikely that persuasion would have occured for an individual who found the presentation of persuasive arguments to contain logical flaws and reasonable disbelief.

While argument quality and all other peripheral route cues of the ELM model were stated to exist external to the specific content of the persuasive message, it is important to take into consideration the nature of the argument quality cue as most closely related to the message content. Other peripheral cues, such as source expertise, number or arguments and source likeability are more readily attributable to characteristics of the message, rather than the message content. This result was consistent with research by Ziegler and Diehl (2001), and Park et al. (2007). The significant correlation between argument quality and employability self-efficacy may also be explained by argument quality's involvement not only in peripheral route processing but also in central route processing as well according to Kang, Cappella, and Fishbein (2006). Although holding need for cognition constant in the partial correlation analysis should have accounted for high need for cognition, the unexplored aspects of central route processing may help explain the significance of results for argument quality if it is interacting with both of ELM's routes of processing.

Hypothesis 2 was concerned with the relationship between perceived source expertise and the participant's employability self-efficacy. Results from the partial correlation analysis indicated that there is no significant relationship between source expertise and employability self-efficacy. While it is possible that source expertise plays

no role in employability self-efficacy, other results from the partial correlation analysis may provide insight into the importance of this peripheral cue. Partial correlation analysis showed that there was a significant relationship between source expertise and the peripheral cues argument quality and source likeability. Both peripheral cues, argument quality and source likeability, were shown to have a significant positive correlation with employability self-efficacy, as well as source expertise.

The relationship between source expertise and the other peripheral cues was supported by the research of Ziegler and Diehl (2001), who found increases in argument quality or source likeability combined with source expertise to increase persuasion. Source expertise alone may not have contributed significantly to persuasion or employability self-efficacy; however, it may have interacted in tandem to the other peripheral cues in predicting the outcome variable. This inter-peripheral cue relationship may be supported in conceptualizing all other peripheral cues (argument quality, source expertise, and source likeability) as related. As stated earlier argument quality may have had a significant positive correlation in respect to its connection to believability in relation to the message content, and source expertise may moderate how employability self-efficacy relates to both argument quality and source likeability.

The number of arguments presented on average both inside and outside of class, as well as the number of professors in a participant's major area of study were examined as an averaged ratio for the third hypothesis. Results from the correlation analysis indicated that there was no significant relationship between the number of arguments and employability self-efficacy. It is likely that this peripheral route cue showed no

significant relationship either to the outcome variable or to other peripheral route cues for three different reasons. Although the number of arguments has been previously shown to have a significant positive correlation to increased persuasion by Petty and Cacioppo (1984), as well as Wang and Chen (2006), it was shown to have increased significant correlation in relation to source expertise by Maddux and Rogers (1980).

The first explanation for lacking support of Hypothesis 3 is that peripheral route cue source expertise was not shown to have a significant positive correlation with employability self-efficacy, and based on Maddux and Rogers' (1980) research, may have also not have had a significant correlation to employability self-efficacy.

Secondly, although the need for cognition was controlled for in participant response in the partial correlation analysis, the lack of measure for central route processing may have had an effect on the results for the peripheral cue number of arguments. According to research by Petty and Cacioppo (1986), the number or arguments may also qualify as the central route cue repetition. Repetition was shown by Petty and Cacioppo to initially increase persuasion in central route processing, while eventually decreasing persuasion in the case of over-saturation. It is possible, though somewhat unlikely that an increased number of arguments for high need for cognition individuals constituted over-saturation of repetition in central route processing.

A third and final explanation of lacking support for Hypothesis 3 (number of arguments) can be found in the design of the measure. Initially it was believed that by asking participants to indicate frequency and averages by inputting average frequency data would yield in-depth information concerning the nature of this variable. The use of

average frequency data however, was relatively inconsistent with the design of the research measure, and indicated the physical recall of events, rather than a perception of averages or frequencies by the participants, such that a response of 7 may constitute a perceived high frequency for one individual, and constitute a perceived low frequency for another. Data collected by Likert type items would have more closely aligned with the perceptual nature of this study, and may have yielded different results more closely aligned with the overall model.

The fourth hypothesis stated that there would be a positive correlation between source likeability and employability self-efficacy while controlling for need for cognition. Partial correlation data analysis yielded results in support of this hypothesis. These results were supported by the research of DeBono and Harnish (1988). Additionally Ziegler and Diehl (2001) found that the presence of source likeability combined with argument quality were significant predictors of increased persuasion. Based on the partial correlation results of this study which indicated significant positive correlations between both argument quality and source likeability to employability self-efficacy and the research of Ziegler and Diehl, the results are statistically supported in multiple studies.

The relationship between source likeability and argument quality may also be explained through the operational definitions of argument quality and source likeability towards the concept of believability. Sources that are perceived as more likeable by participants may also have been perceived as more believable in contrast to unlikable

sources, which may inherently have been prescribed notions of disbelief by participants. This assertion is supported by the previous research of Ziegler and Diehl (2001).

The research question forwarded in the present study aimed to examine if individual peripheral route cues had a relationship with employability self-efficacy while controlling for all other peripheral route cues. Results from linear regression analysis suggested that the overall model is supported and that peripheral route cues significantly predicted employability self-efficacy. While all individual peripheral route cues indicated a relationship in the predicted directions of the Elaboration Likelihood Model, only the first peripheral route cue (argument quality) had significant relationship with the outcome variable. It is likely that this finding stemmed from aspects of argument quality such as logical reasoning and believability. As stated previously in the discussion of Hypothesis 1, argument quality is most closely related to persuasive message, and is the relatively least related to the source of the persuasive messages.

Other peripheral route cues: source expertise, number of arguments, and source likeability, were not shown to have had a significant relationship the predictor variable while controlling for other variables in the linear regression analysis. These individual peripheral route cues do not have an isolated relationship with the outcome variable; however, they had a relationship with other peripheral cues. While conducting statistical analysis for interaction effects was outside the scope of the current study, conclusions can still be drawn about the potential interaction of predictor variables.

Results from the partial correlation concerning inter-predictor variable correlation significance and individual hypothesis support, as well as the research by Petty and

Cacioppo (1986), Ziegler and Diehl (2001), Reinhard and Messner (2009) provide support for interaction between peripheral route cues in their effect on employability self-efficacy. The predictor variable source likeability, which showed significant positive correlation in the partial correlation analysis, was not found to have had a significant relationship in the linear regression model. Since partial correlation analysis was only controlling for need for cognition, and not controlling for the other predictor variables, and linear regression was, interaction between other predictor variables and source likeability may have occurred.

A final finding of importance resulting from the analysis concerned the role of need for cognition in the process of peripheral route persuasion. Based on the ELM by Petty and Cacioppo (1986) the need for cognition variable has a significant impact on the effectiveness of either peripheral or central route processing. Further, research by Chaiken (1980), Reinhard and Messner (2009), Wang and Chen (2006), Petty and Cacioppo (1984), and DeBono and Harnish (1988), supports the role of low need for cognition with peripheral route processing.

Results for the present study indicated that while controlling for need for cognition the overall model indicated significant positive correlation. Some authors, such as Martin, Lang, and Wong (2004) have found that peripheral route cues such as argument quality may have a relationship with need for cognition contrary to the ELM model. Results from this study concerning the role of need for cognition in effectiveness of peripheral route cues on employability self-efficacy indicate that the need for cognition variable may not be as important as previously thought. It is also possible that the need

for cognition variable may have influenced the effectiveness of peripheral and central route processing in a more complex and less dichotomous manner as suggested in the theory.

Taking into consideration the results of analysis from the hypotheses and research question, a significant relationship is present. Professors who are interested in fostering the beliefs and expectations of their students concerning employability should consider utilizing peripheral route cues. The results indicate that the use of argument quality may be most successful, as it has significant positive correlation with employability self-efficcacy both combined with and separate from the other peripheral route cues. Although the use of a single peripheral route cue may aid in the process of increased persuasion for employability methods, it is strongly recommended that a combination or holistic approach to utilization of peripheral route cues be taken. Presenting students with logical, reasonable arguments, expressing and reifying expertise and credibility, and working towards the development of a likeable or friendly perception with students should increase their beliefs and expectations concerning employment post-degree.

4.2 Limitations and Suggestions for Future Research

The current study was limited in drawing from a convenience sample. The results, while potentially useful to this specific Northwestern University may not be entirely applicable in a broader context.

A second limitation of the current study was that participants' results from the need for cognition variable in this study were a positively skewed distribution. While there was variance in the need for cognition scale, results from participants indicated an

overall tendency towards increased need for cognition. A larger sample might have provided additional insight into the role that need for cognition may play in the peripheral route to persuasion.

Future research should examine both the central and peripheral routes to persuasion related to employability self-efficacy through human science methodologies. This approach would allow for results which explore more fully the complexities of cognitive processing related to persuasion and employability self-efficacy. In addition to exploring both routes of persuasion outlined in the ELM, future research should consider other post-secondary education programs such as associate, technical, certification, and graduate level degrees. Looking at these different programs could potentially yield useful information in the adaptation of best practice if university professors intend to facilitate increased employment self-efficacy for graduating students.

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Appendix A

Research Exemption Letter

(907) 474-7800
(907) 474-5444 fax
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Institutional Review Board
909N Koyukuk Dr. Suite 212, P.O. Box 757270, Fairbanks, Alaska 99775-7270

February 23, 2011

To:	Robert Arundale, PHD Principal Investigator
From:	University of Alaska Fairbanks IRB
Re:	[204158-1] Peripheral Route Processing and Self-Efficacy in Looking at University of Alaska Fairbanks Faculty's Employability Discussion with Students- A Survey Based Research Approach.

Thank you for submitting the New Project referenced below. The submission was handled by Exempt Review. The Office of Research Integrity has determined that the proposed research qualifies for exemption from the requirements of 45 CFR 46. This exemption does not waive the researchers' responsibility to adhere to basic ethical principles for the responsible conduct of research and discipline specific professional standards.

Title:	Peripheral Route Processing and Self-Efficacy in Looking at University of Alaska Fairbanks Faculty's Employability Discussion with Students- A Survey Based Research Approach.
Received:	February 4, 2011
Exemption Category:	2
Effective Date:	February 23, 2011

This action is included on the February 24, 2011 IRB Agenda.

Prior to making substantive changes to the scope of research, research tools, or personnel involved on the project, please contact the Office of Research Integrity to determine whether or not additional review is required. Additional review is not required for small editorial changes to improve the clarity or readability of the research tools or other documents.

Appendix B

Informed Consent Letter

From:

Brandon Uzzell
Graduate Student: Department of Communication
University of Alaska Fairbanks

Hello,

Thank you for taking the time to consider taking this survey.

Please note that the following survey is anonymous, meaning that at no point will any identifiable information about you be obtained or kept during the process. Answers you give to the following items cannot be linked to you in any way, and no member of the university, community or your peers will be able to make inferences about your answers. The data collected from this survey will be reported only in aggregated (combined) form, and will not be made available to anyone besides myself and the Principal Investigator as set forth by the Institutional Review Board of the University of Alaska Fairbanks.

Your participation is completely voluntary, and at any point in time you may choose to stop taking this survey by closing the browser window.

Questions or concerns regarding this survey may be directed as follows.

UAF Department of Communication
503 Gruening Building
907.474.6591
fycomm@uaf.edu

Or

UAF Office of Research Integrity
212 West Ridge Research Building
907.474.7800
fyori@uaf.edu

Thank you for your time.

Brandon

Appendix C

Survey Measure

In order to progress through the rest of this survey, please use the following navigation buttons on the bottom of each page.

- Click the Next button to continue to the next page
- Click the Previous button to return to the previous page

If you decide at any point that you wish to quit taking the survey early and not submit your answers, please close the browser window.

At the end of the survey, there will be a button to Submit this Survey. Please be sure to click this button so that your answers will be recorded.

Are you currently enrolled in an undergraduate bachelors' degree program at the University of Alaska Fairbanks?
Yes/No

Age: (Appendix D)

***If you are under the age of 18 you may not continue with this survey. This policy is dictated by the type of research, the Office of Research Integrity, and the University of Alaska Fairbanks Institutional Review Board. If you are under the age of 18 please close the browser window now, and thank you for your interest.**

Current Class Standing: (Appendix D)

Declared Major:* (Appendix D)

***If you have more than one declared major, select the major which is most closely related to your future career or employment goals.**

Have you at any point initiated a formal job search process related to your declared major?

Yes*/No

***If you answered "Yes" to the question above, then when completing the remaining survey items, only consider experiences that took place before you began your formal job search.**

The following items are concerned with perceptions, beliefs, and experiences which you may have had with professors in your declared major. For each item, check the box that indicates the answer that best describes your perception, beliefs, or experiences.

For example, if presented with the statement "I have disliked working in small groups for class assignments:" you would select the answer "Disagree" only if none of the other answers best described your perceptions. See the example below.

I have disliked working in small groups for class assignments.

Sample Likert Item for Survey

The following items are concerned with discussions or communication that you may have had with professors in your major.

Professors in my major have discussed with me specific occupations for which I will be qualified.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

Professors in my major have explained to me why my major is helpful for being employed in specific occupations.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

Professors in my major have been unclear in discussions about how my major qualifies me for specific occupations.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I believe the claims of professors in my major when they have talked to me about employment related to my major.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

Professors in my major have confused me when they have talked about specific occupations for which I will be qualified.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

The following items are concerned with perceptions you may have about professors in your major.

When I have interacted with professors in my major, they have been knowledgeable in their field of study.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

Professors in my major have been competent when providing instruction in my classes.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

Professors in my major have shown expertise in their research during discussions in my classes.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I have doubted professors in my major when they have described course concepts to me.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

Professors in my major have expressed their qualifications as professionals in their field of study when instructing my classes.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

The following items are concerned with perceptions you may have about professors in your major.

Professors in my major have been appropriately friendly during my visits to their offices.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I have enjoyed talking with professors in my major about course topics before or after class.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I have been uncomfortable discussing information about classes with professors in my major.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I have liked professors in my major when interacting with them.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

Professors in my major have been pleasant when answering my questions outside of class.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

The following items are concerned with experiences you may have had with professors in your major.

On average, how many times a semester during class have professors in your major discussed specific occupations which relate to your major? Please enter a number in the box below.

Please enter a number here (Appendix D)

On average, how many times a semester outside of class have professors in your major discussed with you specific occupations which relate to your major? Please enter a number in the box below.

Please enter a number here (Appendix D)

About how many different professors in your major have ever discussed specific occupations for which you will be qualified based on your major? Please enter a number in the box below.

Please enter a number here (Appendix D)

The following items are concerned with beliefs or expectations you may have about yourself.

I believe that I possess the required skills to be employed in occupations that relate to my declared major.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I believe that I possess the required abilities to be employed in occupations that relate to my declared major.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I expect to be employed in an occupation that relates to my declared major.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I do not believe that I have the required skills to be employed in an occupation related to my major.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I have concerns that I may not be employable in an occupation related to my declared major.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

The following items are concerned with your beliefs or perceptions about complex thinking.

I would prefer complex to simple problems.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I like to have the responsibility of handling a situation that requires a lot of thinking.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

Thinking is not my idea of fun.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I try to anticipate and avoid situations where there is likely chance I will have to think in depth about something.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I find satisfaction in deliberating hard and for long hours.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

The following items are concerned with your beliefs or perceptions about difficult thinking.

I only think as hard as I have to.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I prefer to think about small, daily projects to long-term ones.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I like tasks that require little thought once I've learned them.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

The idea of relying on thought to make my way to the top appeals to me.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I really enjoy a task that involves coming up with new solutions to problems.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

Learning new ways to think doesn't excite me very much.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

The following items are concerned with your beliefs or perceptions about difficult thinking.

I prefer my life to be filled with puzzles that I must solve.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

The notion of thinking abstractly is appealing to me.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I feel relief rather than satisfaction after completing a task that required a lot of mental effort.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

It's enough for me that something gets the job done; I don't care how or why it works.*
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

I usually end up deliberating about issues even when they do not affect me personally.
1 Strongly Disagree
2 Disagree
3 Neither Agree nor Disagree
4 Agree
5 Strongly Agree

Please answer the following questions about yourself. Select answers by clicking on the drop down menus and selecting the answer which best describes or characterizes you.

Biological Sex: (Appendix D)

Race: (Appendix D)

Click to Submit

Thank you for your participation in this survey.

Please close the browser window now.

Questions or concerns regarding this survey may be directed as follows.

UAF Department of Communication
503 Gruening Building
907.474.6591
fycomm@uaf.edu

Or

UAF Office of Research Integrity
212 West Ridge Research Building
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fyori@uaf.edu

Appendix D

Survey Notes

Note: Survey items followed by an asterisk (*) indicate reverse scored items.

Note: Bolded text in the Survey indicates text presented to participants, un-bolded text indicates the ability for a participant to select an option or enter a value.

Selection Options: See below

Age: 17 and under, 18, 19, 20 . . . 100

Sex: Male, Female

Current class standing: Freshman, Sophomore, Junior, Senior

Race: Hispanic or Latino, White, Black or African American, Native Hawaiian or Other Pacific Islander, Asian, American Indian or Alaska Native

Declared Major: Accounting, Alaska Native Studies, Art, Arts and Sciences, Biological Sciences, Business Administration, Chemistry, Child Development and Family Studies, Civil Engineering, Communication, Computer Engineering, Computer Science, Earth Science, Economics, Education, Elementary, Electrical Engineering, Emergency Management, English, Eskimo, Inupiaq, Eskimo, Yup'ik, Fisheries, Foreign Languages, General Science, Geography, Geological Engineering, Geology, History, Interdisciplinary Studies, Japanese Studies, Journalism, Justice, Linguistics, Mathematics, Mechanical Engineering, Mining Engineering, Music, Natural Resources Management, Northern Studies, Petroleum Engineering, Philosophy, Physics, Physics, Applied, Political Science, Psychology, Rural Development, Russian Studies, Social Work, Sociology, Statistics, Technology, Theatre, Wildlife Biology and Conservation, Yup'ik Language and Culture

Drop-down # Selection: 1, 2, 3 . . . 100 or more

Appendix E

Tables

Table 1

Intercorrelations for Employability Self-Efficacy and Peripheral Route Cue Predictor Variables While Controlling for Need for Cognition

Variable	1	2	3	4
Employability Self-Efficacy	.47**	.16	.07	.21*
Predictor Variable				
1. Argument Quality	--			
2. Source Expertise	.46**	--		
3. Number of Arguments	-.01	-.21	--	
4. Source Likeability	.49**	.63**	.02	--

*$p < .05$. **$p < .01$

Table 2

Standard Multiple Regression Analysis for Peripheral Route Cues Predicting Employability Self-Efficacy

Variable	B	SEB	β
Argument Quality	.50	.13	.49**
Source Expertise	-.06	.17	-.05
Number of Arguments	.004	.007	.07
Source Likeability	.002	.16	.002
Need for Cognition	-.04	.18	-.02

Note: $R^2 = .27$ ($N = 105$, $p < .05$).
*$p < .05$. **$p < .01$